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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/068,450	02/07/2002	Nobuyuki Kasama	S004-4650	9531

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ADAMS & WILKS
ATTORNEYS AND COUNSELORS AT LAW
31st FLOOR
50 BROADWAY
NEW YORK, NY 10004

EXAMINER

MAGEE, CHRISTOPHER R

ART UNIT	PAPER NUMBER
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2653

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/068,450

Applicant(s)

KASAMA ET AL.

Examiner

Christopher R. Magee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10, 11 and 13-16 is/are rejected.
- 7) ☒ Claim(s) 8, 9 and 12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 02/16/2001. It is noted, however, that applicant has not filed a certified copy of the JP 2001-040589 application as required by 35 U.S.C. 119(b).

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7, 10, 11, and 13-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Davis et al. (hereinafter Davis) (US 6,058,094).

- Regarding claims 1, 10, 11 and 16, Davis shows an information recording/reproduction apparatus (Figs. 1 and 4a-b)) utilizing near field light, comprising:

a light source 101 (col. 4, lines 1-36) for generating light;

a suspension arm 105;

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a flexure fixed 130 to the suspension arm 105;

a near field optical head 106 fixed to the flexure and having a minute aperture formed therein;

a substantially rod-like optical waveguide 102 having a core and a clad for conveying the light emitted by the light source through the core;

a reflection surface 445 spaced apart from a terminal end of the core of the optical waveguide opposite the light source for irradiating light projected from the terminal end of the core to the near field optical head (Fig. 4b);

a recording medium 349 disposed proximate the near field optical head; and

a light reception portion for receiving scattered light caused by an interaction between the minute aperture and the recording medium (Fig. 4b);

wherein the near field optical head has a lens 446 formed on a surface thereof different from a surface on which the minute aperture is formed for focusing light received from the reflection surface onto the minute aperture; and

wherein the terminal end of the core (not numbered) is located at an intermediate part of the optical waveguide 102 so that the clad extends beyond the terminal end of the core.

- Regarding claims 2 and 13, Davis discloses the reflection surface 445 is a plane having an angle of about 45 degrees with respect to the terminal end of the core of the optical waveguide (col. 5, lines 37-41).

- Regarding claim 3, Davis discloses the terminal end of the core is shaped to form a lens (col. 6, line 65 to col. 7, line 5).

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- Regarding claims 4-6 and 14, Davis teaches the reflection surface 445 is a plane formed to increase an expansion angle of a luminous flux projected from the terminal end of the core (Fig. 4b; col. 6, lines 24-32).
- Regarding claim 7, Davis shows the flexure 130 supports the optical waveguide 106 (Fig. 3).
- Regarding claim 15, Davis shows the clad (not numbered) of the optical waveguide 102 extends beyond the end face of the core (Fig. 4b).

Allowable Subject Matter

Claims 8, 9 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- a. Kuwayama et al. (US 4,626,679) is cited to show an optical head and a method of detecting the focus thereof.
- b. Brezoczky et al. (US 5,351,229) is cited to show a tribo-attractive contact slider for an optical read/write system.
- c. Wilde et al. (US 5,940,549) is cited to show an optical system and method using optical fibers for storage and retrieval of information.

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- d. Oumi et al. (US 6,473,384 B1) is cited to show a near field optical head having flexible structure.
- e. Kasama et al. (US 6,631,227 B2) is cited to show an information recording and reproducing apparatus utilizing near field light.
- f. Itou et al. (JP 11-265520) is cited to show a small sized and lightweight adjacent field optical head capable of increasing the relative speed of a recording medium.
- g. Oumi et al. (EP 0 996 122 A1) is cited to show a near field optical head.
- h. Kamiyanagi (JP 2000-163794) is cited to show a miniaturized optical head.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Magee whose telephone number is (703) 605-4256. The examiner can normally be reached on M-F, 8: 00 am-5: 30 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.



Christopher R. Magee
Patent Examiner
Art Unit 2653

January 25, 2004



GEORGE J. LETSCHER
PRIMARY EXAMINER